UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
**United States Patent and Trademark Office**
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/880,202 | 06/12/2001 | Noel Verbiest | 449 | 6131 |

7590 06/19/2003

Keith Kline
14910 Bonner Court
Morgan Hill, CA 95037-5925

| EXAMINER |
|---|
| NGUYEN, DANNY |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2836 | |

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/880,202 | VERBIEST ET AL. | |
| | Examiner | Art Unit | |
| | Danny Nguyen | 2836 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *12 June 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *14-20* is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Packard et al. (USPN 5,946,173). Packard et al. disclose a circuit to control and monitor a voltage on a human body comprises an electrode in contact with a skin of user (col. 3, lines 18-24) and a ground fault interrupter integrated circuit in a path to ground (fig. 1) a current transformer (20), relay contact (such as 22), bleeder resistor (b), a resistance value (resistor 14) of the test path added to a skin to electrode to determines a worse case voltage excursion, and a second winding (24) of the current transformer (20) connected to an input of ground fault interrupter (such as 30, 40, 42) such that if a current exceeding a preset level flow through the path to ground, the interrupt circuit open the contacts (22) (col. 3 and 3, lines 62-12).

2. Claims 12, 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Robitaille (USPN 5,051,732). Robitaille discloses a circuit (fig. 1) to control and monitor voltage on a human body comprises an electrode (such as wrist strap shown in fig. 1) in contact with skin of an operator and ground fault monitor (10) in path to ground a ground fault bistable multi-vibrator (72 and 56), window detector (22), and an alarm means (50), wherein triboelectric current burst detected by the electrode enter the

ground monitor circuit, a first signal is sensed from the ground fault monitor circuit (10) and is processed in the window detector (22), such that if an amplitude of the first signal exceeds a predetermined level the ground fault bistable multivibrator (56) causes the alarm means (50) to be activated, and causes the relay contact (84) open (col. 2, lines 47-53, and col. 3 lines 11-15).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Linnman et al. (USPN 4,175,255) in view of Yamamoto (USPN 4,042,967).

Regarding to claims 1, 3, 4, 7, Linnman et al. disclose a method of monitoring and controlling a voltage on a human body comprises the steps of electrically connecting an operator to a ground terminal by providing a contact with skin of the operator via at least one electrode (such as a metal wrist band, col. 2, lines 39-40), continuously monitoring a triboelectric current flowing the ground (col. 1, line 55-59), and providing means to interrupt a path to ground when a dangerous large current is detected (see abstract). Linnman et al. do not disclose a virtual ground. Yamamoto discloses a virtual ground (fig. 1, the ground terminal connected to ground fault sensor via resistor 22). It would have been obvious to one having skill in the to modify the

circuit of Linnman et al. with a virtual ground as taught by Yamamoto in order to limit current flowing in the hot line (Yamamoto, col. 38-40).

Regarding to claim 5, Linnman et al. disclose all limitations of claim 1 except for having a maximum resistance in the path to ground, which does not exceed 10 Kohm. Yamamoto discloses a maximum resistance (resistor 22) in the path to ground, which does not exceed 10 Kohm. It would have been obvious to one having skill in the to modify the circuit of Linnman et al. with a path to ground resistor as taught by Yamamoto in order to limit current flowing in the hot line (Yamamoto, col. 38-40).

Regarding to claim 6, Linnman et al. disclose the electrode is a metal. Linnman et al. does not disclose the electrode is a silver. ). It would have been obvious to one having skill in the to replace the electrode in the Linnman et al. circuit with a silver electrode to provide a better conductive electricity.

Regarding to claims 8, 9, Linnman et al. disclose the method comprises two electrodes in contact with skin of the user such that two separate paths to ground being formed, the method including monitoring integrity of the paths to ground by comparing current flowing through a first one of the paths to ground to current flow through a second one of the paths to ground wherein a differential greater than a predetermined limit triggers alarm means (4) (see abstract).

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Linnman et al. in view of Yamamoto, and further in view of Robitaille. Linnman et al. and Yamamoto disclose all limitations of claim 1 except for having a means to determine whether or not the operator is properly wearing the electrode. Robitaille discloses a

means to determine whether or not the operator is properly wearing the electrode (see abstract). It would have been obvious to one having skill in the to modify the circuit of Linnman et al. and Yamamoto with a device to detect the connection of the wrist strap in order to prevent operator from being getting electric shocked.

***Allowable Subject Matter***

5. Claims 14-20 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 14 recites a circuit to control and monitor a voltage on a human body comprises an activity detector means, an absolute value amplifier, and a signal from the ground fault sensing circuit being processed through the current voltage converter, the filter, and the absolute value amplifier, the absolute value amplifier converting bipolar signals into positive unipolar signals, the unipolar signals driving the display means and a first signal is picked off from the display means to drive the activity detector means, a second signal is picked off from the ground sensing circuit, the second signal being processed through the window detector and through the ground fault bistable multivibrator, the output from the activity detector and the ground fault bistable multivibrator drive multivibrator which in turn drive the alarm.

The references of record do not teach or suggest the aforementioned limitation, nor would it be obvious to modify those references to include such limitation.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danny Nguyen whose telephone number is (703)-305-5988. The examiner can normally be reached on Mon to Fri 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (703)-308-3119. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9318 for regular communications and (703)-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.

DN

DN
June 12, 2003

GREGORY J. TOATLEY, JR.
PRIMARY EXAMINER